



No.	Author N. Budd Veverka, Farmland Game Research Biologist	Date
961	Title 2008 American Woodcock Singing-Ground Survey	07/28/08

Abstract: *Three male American woodcock were heard singing on 3 of 14 survey routes in Indiana during 2008. This compares to 4 woodcock heard along 3 of 16 survey routes in 2007. Since 1968, the number of woodcock heard singing during surveys in Indiana has declined an average of 4.3% per year, whereas only a 1.1% decline per year has been observed for the entire Central Management Region. The primary cause of the population decline is related to the continual loss of early successional moist-soil woodland habitats along migratory routes, on the breeding grounds, and in over-winter areas.*

Work Plan #: 300FW0BIRD07524

The American woodcock is a popular game bird throughout much of the Midwest, particularly with ruffed grouse hunters. Because the species is migratory in nature, the U. S. Fish and Wildlife Service (USFWS) is responsible for its management. State and provincial fish and wildlife agencies, in cooperation with the USFWS, conduct annual counts of male woodcock during the birds' peak display period. Survey data are used to monitor population trends in 2 survey regions; the eastern and central regions. Indiana is 1 of 6 states and 2 provinces in the central management region participating in the annual surveys. Also participating in the survey are the states of Minnesota, Wisconsin, Michigan, Illinois, and Ohio and provinces of Ontario and Manitoba. The Indiana Division of Fish and Wildlife has cooperated with USFWS since the inception of the American woodcock survey in 1968.

Methods

The Office of Migratory Bird Management of the USFWS assigns survey routes and procedures for each state. Each route is 3.6 miles in length and includes 10 listening stops. Beginning shortly after sunset, participants count the number of woodcock heard "peenting" (vocalization of displaying male woodcock on the ground) at each stop. In 2008, Indiana was assigned 14 routes to be surveyed between 10 April and 20 May. Surveys were not conducted when temperatures

dropped below 40° F, during rain, or when winds exceeded 12 mph. At least 9 out of 10 points on each route must be within the prescribed guidelines for the route to be counted in the analysis.

Results

Three woodcock were heard "peenting" on 3 of 14 routes completed in 2008 (Table 1) as compared to 4 woodcock heard on 3 of 16 routes surveyed in 2007. Four routes were common to both years with 3 birds heard in 2008 on those routes surveyed in 2007. Based on Cooper et al. (2008), using hierarchical modeling, the number of woodcock heard in Indiana has declined by an average of 5.4% per year over the last 10 years (1999-2008), and by 4.3% per year from 1968-2008 (Figure 1). These declines are considerably greater than the 1.5% and 1.1% annual decline estimated for the entire Central Management Region over the same time periods.

Discussion

Like other upland game birds in Indiana, the number of American woodcock has progressively declined over the last 3 decades. Similar in habitat to ruffed grouse, American woodcock favor early successional woodlands associated with forest manipulation. However, habitat requirements for woodcock are more specific than



those for ruffed grouse in that early successional habitats are most utilized when they contain areas of moist soils. Moist soil is essential for woodcock because they feed by probing their beak into the ground to find grubs and earthworms.

Unfortunately, the reduction in timber harvest on our public and private lands has caused a decrease in the amount of habitat available to American woodcock. Without forest manipulation such as logging and fire, early successional habitats will continue to be lost and populations of American woodcock will continue to decline.

Literature Cited

Cooper, T.R., Jr., K. Parker, and R. D. Rau. 2008. American woodcock population status, 2008. U.S. Fish and Wildlife Service, Laurel, Maryland. 15 pp.

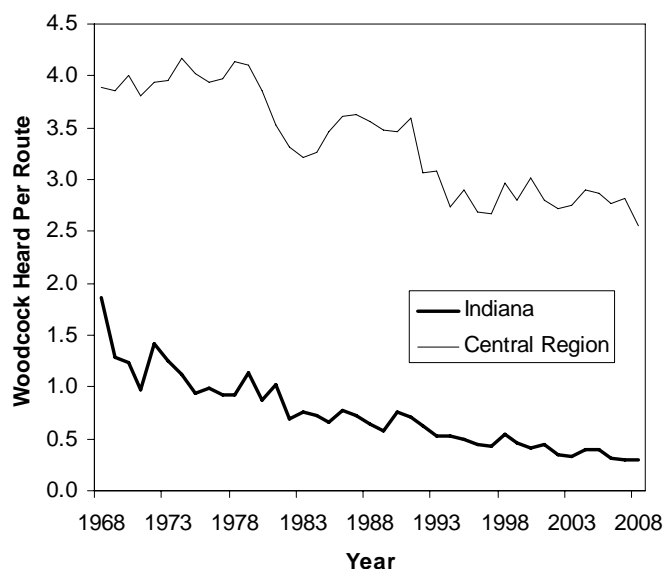


Figure 1. Breeding Population Trends (singing-males per route) for American woodcock from the annual Singing-Ground Survey, 1968-2008 (estimated using hierarchical modeling techniques; Cooper et al 2008). The Central Management Region includes the states of Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin, and the Canadian Provinces of Ontario and Manitoba.

Table 1. Number of male American woodcock heard singing along Indiana survey routes from 2006 to 2008.

Route No.	County	2006	2007	2008
1	St. Joseph	NS ^a	0 ^b	NS
3	Elkhart	0	NS	NS
5	Steuben	NS	0	NS
7	Porter	NS	NS	NS
10	Kosciusko	0 ^b	NS	NS
11	Noble	0	NS	NS
12	Dekalb	NS	NS	0
14	Jasper/Starke	0	1	1
15	Kosciusko	NS	NS	0
17	Fulton/Pulaski	2	1	1
18	Adams	0	NS	NS
19	Newton	NS	0	NS
20	White	0	0	NS
23	Wells	0	0	NS
26	Tipton	0	NS	NS
27	Grant	NS	NS	0
29	Fountain	NS	0	NS
34	Vermillion	NS	0	NS
35	Montgomery	NS	0	NS
36	Henry/Wayne	NS	0	NS
37	Wayne	NS	0	NS
38	Hendricks	NS	0	NS
40	Hancock	NS	NS	0
46	Johnson	NS	2	1
47	Sullivan	0	NS	NS
49	Owen	NS	NS	0
51	Ripley	0	NS	NS
53	Dearborn	NS	0 ^b	NS
54	Knox	0	NS	NS
55	Jackson	1	0	0
56	Jennings	0	NS	NS
59	Jefferson	NS	0 ^b	NS
60	Switzerland	NS	0 ^b	NS
61	Clark	NS	NS	0
62	Gibson	NS	NS	0
63	Pike	NS	0	NS
74	Boone	NS	NS	0
75	Hamilton	NS	NS	0
79	Harrison	0	NS	NS
81	Warrick	NS	0	NS
84	Carroll	0	NS	NS
85	Jefferson	NS	NS	0
Males Heard Statewide		3	4	3
Number of routes conducted		16	20	14
Number of Routes used in Analysis		15	16	14

^a NS = not surveyed.

^b Route removed from data analysis for incomplete data.